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ABSTRACT OF THE DISCLOSURE

A magnetoresistive device includes a magnetization pinned layer, a magnetization free layer, a nonmagnetic intermediate layer formed between the magnetization  
5 pinned layer and the magnetization free layer, and electrodes allowing a sense current to flow in a direction substantially perpendicular to the plane of the stack including the magnetization pinned layer, the nonmagnetic intermediate layer and the magnetization  
10 free layer. At least one of the magnetization pinned layer and the magnetization free layer is substantially formed of a binary or ternary alloy represented by the formula  $\text{Fe}_a\text{Co}_b\text{Ni}_c$  (where  $a + b + c = 100$  at%, and  $a \leq 75$  at%,  $b \leq 75$  at%, and  $c \leq 63$  at%), or formed of  
15 an alloy having a body-centered cubic crystal structure.

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